

Exercice 1

$$\pi_{\text{ssn}, \text{fname}, \text{lname}, \text{address}}(\sigma_{\text{departement}='recherche'}(\text{employee}))$$

Exercice 2

$$\pi_{\text{pnumber}, \text{dnumber}, \text{lname}, \text{address}, \text{bdate}}(\sigma_{\text{project.location}='Stafford' \wedge \text{project.dnum}=\text{department.dnumber} \wedge \text{department.mgr_ssn}=\text{employee.ssn}}(\text{project} \times \text{department} \times \text{employee}))$$

Exercice 3

$$\pi_{\text{ssn}, \text{fname}}(\sigma_{\text{dno}=5}(\text{employee}) \div \pi_{\text{ssn}, \text{pnumber}}(\sigma_{\text{dnumber}=5}))$$